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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 2002 P 10624 US

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on September 19, 2006

Signature: /Ira S. Matsil/

Typed or printed name: Ira S. Matsil

Application Number	Filed
10/724,011	November 26, 2003

First Named Inventor: Heer

Art Unit	Examiner
2129	Coughlan, Peter D.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor.
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 35,272
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

/Ira S. Matsil/
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Typed or printed name

972-732-1001
Telephone number

September 19, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

- [X] *Total of 2 forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Heer	Docket No.:	2002 P 10624 US
Serial No.:	10/724,011	Art Unit:	2129
Filed:	November 26, 2003	Examiner:	Peter D. Coughlan
Title:	Arrangement of Configurable Logic Blocks		

Mail Stop: AF
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Pre-Appeal Brief Request for Review

Dear Sir:

The present application has been rejected because 1) the drawings are different than the broadest claims; 2) the product claims are directed to non-statutory subject matter; and 3) the claims are obvious over a combination of at least five unrelated references. Applicant respectfully submits that the rejections are clearly inconsistent with well established patent law and requests withdrawal of the final rejection and allowance of the claims.

1. Drawings

The final rejection states that the lone figure shows six inputs into a CLB control logic circuit and the claims state there are only four inputs. While the figure shows six inputs, the claim never states that there are only four inputs. The figure illustrates a preferred embodiment; the claims recite the claimed invention. Certainly, a figure that shows six inputs must, by definition, show four inputs. As a result, the figure clearly illustrates what is claimed.

2. Statutory Subject Matter

Claims 1-10 and 14 have been finally rejected under 35 U.S.C. § 101 for non-statutory subject matter. Applicant respectfully submits that the product claims in the present application are directed to statutory subject matter.

Section 101 provides that a patent may be obtained for "any new and useful process, machine, manufacture or composition of matter." Claim 1 is directed to an arrangement that includes an input data node, a CLB control logic circuit, a look-up table, an input data bus, a multiplexer, a control input node and a register data bus. These are all tangible, concrete things. Similarly, claim 6 is directed to a logic circuit that includes a register, a comparator, a multiplexer and a control block. Once again, these are tangible things.

The final rejection states that the "invention is ineligible because it has not been limited to a substantial practical application." (emphasis in original) According to the final rejection, "the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is 'useful, tangible and concrete.'" (emphasis in original)

Applicant notes that the test is directed to whether "steps" recite a particular result that is useful, tangible and concrete. The present claimed invention has no steps. Rather, it is directed to a device. The elements of the claims, some of which are listed above, are clearly tangible and concrete. In other words, the final result is tangible and concrete.

Further, the claimed invention is useful. For example, embodiments of the invention provide a solution to the problem of minimizing the use of area for configurable array blocks. Par. [0015]. As another example, one configuration shows its

advantage in that for the implementation of more than one conditional branch in an LUT, an additional savings of hardware resources is achieved by reducing the required CLBs. Par. [0021].

The final rejection states that an arrangement of logic blocks or a logic circuit has no defined practical application. Applicant respectfully disagrees. While there is no evidence formally of record, Applicant suspects that one can think of a fair number of companies that earn billions of dollars selling logic blocks and logic circuits. It is difficult to imagine that their customers would spend billions of dollars for products that have no practical application.

3. Obviousness

Independent claim 1 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tseng, Mano, Barstow, Hellestrand and Miller. Independent claim 6 has been rejected over these five references and Nataraj and independent claim 11 has been rejected over the five references and Nomura.

While Applicant understands that there is no limit to the number of references that can be used in a valid Section 103 rejection, Applicant points out that no fewer than five references have been relied upon to show the seven elements of claim 1 (and six references are used to show the four elements of claim 6 and the three elements of claim 11). Of significant importance, none of these references provide any teaching or suggestion that they can be combined. In particular, the Office Action relies upon:

1. Tseng, which describes a XC4000 series FPGA;
2. Mano, a textbook that shows multiplexers used to select registers;
3. Barstow, which describes software to implement an if-then function;

4. Hellestand, which shows a virtual processor; and

5. Miller, which describes a programmable gate array.

Applicant respectfully submits that combination of these references is improper in order to obtain the present invention. A Section 103 rejection cannot be sustained by simply finding each of the elements in different, unrelated references. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP §2143.01. In this case, no teaching, suggestion or motivation exists.

For example, the final rejection admits that the logic circuit taught by the Mano textbook fails to teach at least one look-up table but asserts that it would be obvious to modify these teachings as taught by Barstow. Mano is directed to an OR gate, a multiplexer and a register load; Barstow to computer programs implemented, for example, in "an object-oriented language." Applicant respectfully submits that one of ordinary skill in the art would not know to modify the combinational logic of Mano to implement the software functions of Barstow.

To find a motivation to combine, the final rejection states "For the purpose of having the ability to identify a if-then-else statement." These reasoning is clearly circular. Further, this purpose appears nowhere in the references. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP §2143.01 III, citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). The

suggestion to combine must appear in the references themselves. MPEP § 2143.01, as quoted above.

Similar arguments can be made for claim 6, which teaches a logic circuit that includes a register, a comparator, a multiplexer and a control block, wherein the logic circuit realizes an "if then else" branch based upon information carried at the input node and information stored in the register. The seven references simply provide no motivation to obtain the logic circuit as described by claim 6.

The final independent claim, claim 11, provides a means for performing a switching operation, a means for selecting and a CLB control logic. The references of record cannot be combined to achieve this logic circuit.

It is black letter law to state that Applicant is entitled to a patent unless prior art is found to anticipate or make obvious the claimed invention. 35 U.S.C. § 102. In order to make such a rejection, the Office has the obligation to make a prima facie case of obviousness. The Office Action clearly fails to meet this burden of proof. Applicant therefore respectfully submits that claims 1-14 are allowable over the references of record.

Respectfully submitted,

9/19/06
Date

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